

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

HUMAN SPACE FLIGHT

FISCAL YEAR 2002 ESTIMATES

GENERAL STATEMENT

GOAL STATEMENT

The Human Space Flight program comprises NASA's Human Exploration and Development of Space (HEDS) Enterprise, which has as its ultimate mission to open the space frontier by exploring, using and enabling the development of space. Our current programs provide safe, assured transportation to and from space for people and payloads, and develop and operate habitable space facilities in order to enhance scientific knowledge, support technology development, and enable commercial activity. The five strategic goals of the HEDS Enterprise and the Human Space Flight program are the following:

- Expand the Space Frontier
- Enable humans to live and work permanently in space
- Enable the commercial development of Space
- Share the experience and benefits of discovery

In FY 2000 and FY 2001, the Human Space Flight (HSF) account provided only for the *direct* funding of human space flight activities. Space operations services had been funded within the Science, Aeronautics and Technology (SAT) account; and Safety, mission assurance and engineering had been funded within the Mission Support account. Beginning in FY 2002, other-than-direct costs (which includes Research and Program Management and non-programmatic Construction of Facilities) will be allocated to either the HSF or the SAT account based on the number of full time equivalent people, and there will no longer be a Mission Support account.

In FY 2002, the human space flight (HSF) appropriation provides funding for: HSF activities; space operations services; Safety, mission assurance and engineering activities supporting the Agency; and for other-than-direct costs associated with these activities. The HSF activities include development and operations of the Space Station, the Space Station research program, and operation of the Space Shuttle. This includes development of contingency capabilities for the Space Station, high priority investments to improve the safety of the Space Shuttle, and required construction projects in direct support of Space Station and Space Shuttle programs. This appropriation also provides for salaries and related expenses (including travel); design, repair, rehabilitation, and modification of facilities and construction of new facilities; maintenance, and operation of facilities; and other operations activities supporting human space flight programs; and space operations, safety, mission assurance and engineering activities that support the Agency.

STRATEGY FOR ACHIEVING GOALS

In Human Space Flight, we are committed to ensuring effective, efficient and safe transportation of people and payloads to and from space. Our first priority is to fly safely. This requires constant vigilance from the entire Shuttle community, as well as making appropriate investments to reduce risks and increase the safety of the Space Shuttle. In addition, we are actively probing our processes in order to reduce operational costs, improve performance on development projects and to selectively enhance capabilities to meet customer needs.

As we expand our capabilities for allowing humans to live and work continuously in space, we have transitioned our research from the Shuttle-borne Spacelab, to the conduct of joint space activities with Russia aboard the Mir, and now in FY 2001 and beyond to the International Space Station.

Human Space Flight, through the utilization of Space Shuttle and Space Station, provides the capabilities to enable the advancement of scientific knowledge leading to new discoveries, technologies, and materials that will benefit future space exploration and development, as well as life on Earth. In meeting these capabilities, we will ensure that our workforce, our most important resource, will have management support to meet operational and future program requirements through career development training and employee recognition programs.

Recognizing the national benefits of past and future space activities, we will work diligently to maximize the Human Space Flight program's contribution to the national community. We contribute science and engineering educational opportunities for our youth, support collaborative relationships with industry, and improve the nation's quality of life by making advanced technology, directly and through "spinoffs", available to the private sector.

Our implementing strategies for achieving Human Space Flight goals are:

- Engage NASA's customers in setting HEDS goals, objectives, and priorities;
- Ensure that safety and health are inherent in all that we undertake;
- Focus on research and development, and invest in breakthrough technologies;
- Privatize and commercialize operational activities;
- Employ open, competitive processes for selecting research projects;
- Promote synergy with other Enterprises and cooperation and engagement with organizations and customer communities outside of NASA;
- Promote synergy between fundamental research disciplines and mission-oriented research within HEDS and with other Enterprises; and
- The HEDS Enterprise must forge partnerships and customer engagement alliances across a broad spectrum, including academia, industry (aerospace and non-aerospace), other NASA Enterprises, International space agencies and organizations, other U.S. Government agencies, and non-profit and non-governmental organizations.

Human space flight achievements in exploration and development of space have paved the way for enhancing our nation's leadership in expanding the human presence in space. The necessity to fly safely and the requirement to satisfy payload customer needs, while striving to reduce operations costs will be the dominant programmatic thrusts throughout the next decade. Our success in achieving Human Space Flight goals and objectives will play a central role in leading our Nation towards realizing the boundless potential for humankind, of the exploration and development of space.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

HUMAN SPACE FLIGHT

**FISCAL YEAR 2002 ESTIMATES
(IN MILLIONS OF REAL YEAR DOLLARS)**

BUDGET PLAN

	FY 2000 OPLAN <u>01/18/01</u>	FY 2001 OPLAN <u>03/01/01</u>	FY 2002 PRES <u>BUDGET</u>
	(Thousands of Dollars)		
HUMAN SPACE FLIGHT	<u>5,487.9</u>	<u>5,450.8</u>	<u>7,296.0</u>
SPACE STATION	2,323.1	2,112.8	2,087.4
SPACE SHUTTLE	2,999.7	3,118.8	3,283.8
*PAYLOAD UTILIZATION AND OPERATIONS	165.1	--	--
PAYLOAD AND ELV SUPPORT	--	90.0	91.3
**INVESTMENTS AND SUPPORT	--	129.2	1,303.5
***SPACE OPERATIONS	[490.0]	[521.7]	482.2
****SAFETY, MISSION ASSURANCE AND ENGINEERING	[43.0]	[47.4]	47.8

* In FY 2001, Payload Utilization and Operations was divided into tow new budget lines - Paylaod and ELV Support and Investments and Support

** In FY 2002, Investments and Support includes other-than-direct costs for Human Space Flight which were previously included in the Mission Support appropriation account.

*** In FY 2000, Space Operations was included in the Science, Aeronautics and Technology Appropriation (as Mission Communication Services) and Mission Support Appropriation (as Space Communication Services). In FY 2001, Space Operations was included in the Science, Aeronautics and Technology appropriation

****In FY 2000 and FY 2001, SMA&E were included in the Mission Support Appropriation

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

PROPOSED APPROPRIATION LANGUAGE

HUMAN SPACE FLIGHT (INCLUDING TRANSFER OF FUNDS)

For necessary expenses, not otherwise provided for, in the conduct and support of human space flight research and development activities, including research, development, operations, *support* and services; maintenance; construction of facilities including *repair, rehabilitation*, revitalization and modification of *real and personal property*, facilities, construction of new facilities and additions to existing facilities, facility planning and design, *environmental compliance and restoration*, and acquisition or condemnation of real property, as authorized by law; space flight, spacecraft control and communications activities including operations, production, and services; *program management; personnel and related costs, including uniforms or allowances therefor, as authorized by U.S.C. 5901-5902; travel expenses*; purchase and hire of passenger motor vehicles; *not to exceed \$20,000 for official reception and representation expenses*; and purchase, lease, charter, maintenance and operation of mission and administrative aircraft, [\$5,462,900,000] \$7,295,500,000, to remain available until September 30, [2002] 2003, *of which amounts as determined by the Administrator for salaries and benefits; training, travel and awards; facility and related costs; information technology services; science, engineering, fabricating and testing services; and other administrative services may be transferred to the Science, Aeronautics and Technology account in accordance with section 312(b) of the National Aeronautics and Space Act of 1958, as amended by Public Law 106-377: Provided, That the authorized funding level for the International Space Station through fiscal year 2006 shall not exceed \$8,197,300,000 except in amounts equal to budget reductions in other Human Space Flight programs.*
(Departments of Veterans Affairs and Housing and Urban Development, and Independent Agencies Appropriations Act, 2001, as enacted by section 1(a)(1) of P.L. 106.377.)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

HUMAN SPACE FLIGHT

**REIMBURSABLE SUMMARY
(IN MILLIONS OF REAL YEAR DOLLARS)**

BUDGET PLAN

	FY 2000 OPLAN <u>01/18/01</u>	FY 2001 OPLAN <u>03/01/01</u>	FY 2002 PRES <u>BUDGET</u>
	(Thousands of Dollars)		
HUMAN SPACE FLIGHT	<u>164.2</u>	<u>162.7</u>	<u>264.6</u>
SPACE STATION	0.1	0.1	0.1
SPACE SHUTTLE	22.0	5.3	5.5
PAYLOAD UTILIZATION AND OPERATIONS	142.1	--	--
PAYLOAD AND ELV SUPPORT	--	9.6	0.6
INVESTMENTS AND SUPPORT	--	147.7	194.2
*SPACE OPERATIONS	[64.4]	[65.4]	63.9
**SAFETY, MISSION ASSURANCE AND ENGINEERING	--	--	0.3

** In FY 2000, Space Operations was included in the Science, Aeronautics and Technology Appropriation (as Mission Communication Services) and Mission Support Appropriation (as Space Communication Services). In FY 2001, Space Operations was included in the Science, Aeronautics and Technology appropriation*

*** In FY 2000 and FY 2001, SMA&E were included in the Mission Support Appropriation*

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

FISCAL YEAR 2002 ESTIMATES

**DISTRIBUTION OF HUMAN SPACE FLIGHT BY INSTALLATION
(Thousands of Dollars)**

Program		Total	Johnson Space Center	Kennedy Space Center	Marshall Space Flight Center	Stennis Space Center	Ames Research Center	Dryden Flight Research Center	Langley Research Center	Glenn Research Center	Goddard Space Flight Center	Jet Propulsion Lab	Headquarters
Space Station	2000	2,323,100	1,681,300	123,600	390,100	0	55,500	2,600	2,500	52,000	700	9,800	5,000
	2001	2,112,841	1,502,542	109,648	309,927	0	72,647	6,135	3,995	73,705	3,375	13,500	17,367
	2002	2,087,400	1,650,500	109,300	196,200	0	52,000	0	100	54,500	2,700	2,000	20,100
Space Shuttle	2000	2,999,700	1,666,200	176,400	1,000,000	38,400	6,600	4,800	200	0	0	0	107,100
	2001	3,118,823	1,863,623	161,500	1,021,200	38,700	1,700	4,800	0	0	8,900	0	18,400
	2002	3,283,800	2,072,800	184,100	954,300	47,000	0	4,800	0	0	2,900	0	17,900
Payload and Utilization Operations	2000	165,100	27,171	77,460	44,779	1,586	960	0	900	489	9,900	635	1,220
	2001	0	0	0	0	0	0	0	0	0	0	0	0
	2002	0	0	0	0	0	0	0	0	0	0	0	0
Paylaod and ELV Support	2000	0	0	0	0	0	0	0	0	0	0	0	0
	2001	90,002	1,300	74,502	3,300	0	0	0	0	0	10,900	0	0
	2002	91,300	1,300	75,174	3,426	0	0	0	0	0	11,400	0	0
Investments and Support	2000	0	0	0	0	0	0	0	0	0	0	0	0
	2001	129,214	33,170	11,750	38,438	20,101	100	0	650	1,800	3,005	850	19,350
	2002	1,303,500	408,306	279,055	259,627	52,742	16,846	13,865	10,520	55,742	57,430	11,357	138,010
Space Operations	2000	0	0	0	0	0	0	0	0	0	0	0	0
	2001	0	0	0	0	0	0	0	0	0	0	0	0
	2002	482,200	139,000	69,000	9,000	0	0	13,000	0	7,300	109,300	129,400	6,200
Safety, Mission Assurance and Engineering	2000	0	0	0	0	0	0	0	0	0	0	0	0
	2001	0	0	0	0	0	0	0	0	0	0	0	0
	2002	47,800	8,645	550	3,700	315	1,245	900	6,185	2,035	12,690	7,705	3,830
TOTAL HUMAN SPACE FLIGHT	2000	5,487,900	3,374,671	377,460	1,434,879	39,986	63,060	7,400	3,600	52,489	10,600	10,435	113,320
	2001	5,450,880	3,400,635	357,400	1,372,865	58,801	74,447	10,935	4,645	75,505	26,180	14,350	55,117
	2002	7,296,000	4,280,551	717,179	1,426,253	100,057	70,091	32,565	16,805	119,577	196,420	150,462	186,040